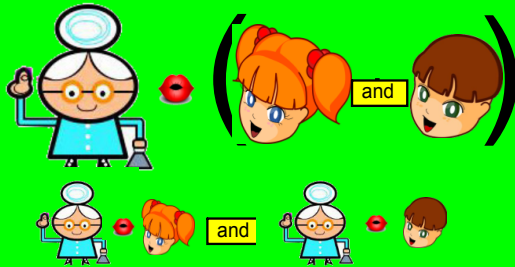


Distributive Property

Grandma comes to visit her grandchildren.
She makes sure that she kisses every child.



So it looked like this

We can use this property when
multiplying by numbers in brackets or by
double digit numbers.

Example

THINK: Grandma

Grandma kisses the first child

16 CAN BE WRITTEN AS (10 + 6)

$$60 \times 16 = 60 \times (10 + 6) =$$

Grandma kisses the second child

Write

$$(60 \times 10) + (60 \times 6)$$

Solve
Do the brackets first

$$600 + 360 = 960$$

Using the Distributive Property to multiply double
digits

$$20 \times 36$$

36 can be written as 30 + 6

Rewrite the Question

$$20 \times (30 + 6) =$$

Rewrite again

$$(20 \times 30) + (20 \times 6) =$$

$$600 + 120 = 720$$

ANOTHER WAY

Example 3

Find the product: $(-25) \times (-48)$

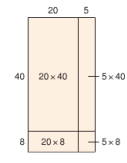
A Solution

Multiply the numbers as if they were positive: 25×48

Use a rectangle model.

$$\begin{aligned} (25) \times (48) &= (20 \times 40) + (5 \times 40) + (20 \times 8) + (5 \times 8) \\ &= 800 + 200 + 160 + 40 \\ &= 1200 \end{aligned}$$

The integers have the same sign, so the product is positive.
So, $(-25) \times (-48) = +1200$



$$47 \times 26$$

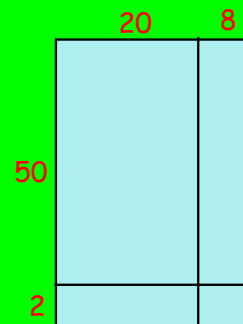


Add all the tiles

$$\begin{array}{r} 800 \\ 240 \\ 140 \\ + 42 \\ \hline 1222 \end{array}$$

Let's Try Some More!

$$52 \times 28$$



¹ Using the method shown, what is the product of 52×28 ?

